REMARKS

Applicant respectfully requests reconsideration in view of the foregoing amendments and the remarks herein below.

In the Office Action dated March 12, 2004, the following objections/rejections were made:

Claim 13: Objected to under 37 CFR § 1.75(a) as failing to particularly point out and distinctly claim the subject matter which the applicant regards as his invention or discovery;

Claims 1-12,14,16,18,19-26: Rejection under 35 U.S.C. 102(b) as being anticipated by Reuman (U.S. Patent 6,069,982 A);

Claims 13 and 15: Rejection under 35 U.S.C. 1 03(a) as being unpatentable over Reuman (U.S. Patent 6,069,982 A) and in view of Saba et al. (U.S. Patent 4,804,831A); and

Claim 17: Rejection under 35 U.S.C. 103(a) as being patentable over Reuman (U.S. Patent 6,069,982 A) and in view of May (U.S. Patent 6,667,125 A).

Claim 13.

Reconsideration of the Examiner's objection to Claim 13 under 37 CFR § 1.75(a) as failing to particularly point out and distinctly claim the subject matter which the applicant regards as his invention or discovery is respectfully requested. Applicant has amended Claim 13 to properly depend from Claim 12, as properly assumed by the Examiner.

Claims 1-12,14,16,18,19-26.

Reconsideration of the Examiner's rejection of Claims 1-12,14,16,18,19-26 under 35 U.S.C. 102(b) as being anticipated by Reuman (U.S. Patent 6,069,982 A) is respectfully requested.

In order to anticipate a claimed invention, a cited reference must teach each and every element of the invention. In the present case, however, Rueman does not teach the element in amended Claim 1 (from which Claims 2-12,14,16,18,19-26 depend) of "b) generating a noise metric from the noise table, said noise metric representing the noise appearance in the image *as seen by a human observer*. [amendment emphasized]." To the contrary, Rueman

specifically teaches the construction of a noise table showing the grey-level dependency of the noise. See, e.g., Col. 8, Lines 55-66. Thus, Rueman states, at Col. 8, Lines 55-66

> L_Y estimates the grey-level dependency of the noise, but passes through the minimum of the noise distribution at each grey-level (points of minimum variance) rather than passing through the mean of the noise distribution at each grey-level as desired. Now, a new LUT L_Y' is derived from L_Y which passes as closely as possible through the mean of the noise distribution at each grey-level. L_Y' is defined to be the linear function of L_Y:
>
> $$L_Y' = b_o(L_Y - min(L_Y)) + min(L_Y) + b_1$$
>
> where the coefficients of the linear function, b_o and b_1, are designated by the set $B_Y=(b_o-b_1)$. By default, B_Y is set to (1.3, 1.54) for a Y band. These represent average values determined from all image acquisition devices for which data is available.

Indeed, Rueman points to this feature as a point of distinction over the prior art in that a primary object of Rueman is "to estimate the noise related spatial characteristics of an input device, i.e., how the noise introduced by the device varies over spatial frequency and grey-level, when measurements of these spatial characteristics are not available in a previously constructed device profile." Rueman, Col. 3, Lines 13-17.

By contrast, the claimed method provides the ability to predict the visibility or appearance of noisiness of an image as seen by a human observer. Thus, in the example on from Page 16, Lines 23-24, the output noise metric is "an indication of the visibility of noise on the output image." Also, in Page 17, Lines 4-6, the noise metrics "decrease along with human perception that the graininess of Fig. 9a is greater than the graininess of Fig. 9b, which is grainier than the image shown in Fig. 9c." Moreover, the present invention, by not requiring a grey-level image analysis or any image analysis, as does Rueman, may determine the noise appearance of an image based solely on metadata analysis. That is, no image analysis is required with the present invention, as is required by Rueman. Page 7, Lines 25-27. Claim 1, as amended, therefore distinguishes over Rueman

by describing the appearance of noise to a human observer, as opposed to relying upon the grey-level dependency of noise.

Claims 2-12, 14, 16, 18, and 19-26 all depend either directly or ultimately from Claim 1. Applicant has addressed the novel aspects that overcome the rejection of Claim 1, and hence the reasons for patentability thereof. It is thus respectfully submitted that Claims 2-12, 14, 16, 18, and 19-26 are likewise patentable.

Claims 13 and 15.

Reconsideration of the Examiner's rejection of Claims 13 and 15 under 35 U.S.C. 103(a) as being unpatentable over Reuman (U.S. Patent 6,069,982 A) and in view of Saba et al. (U.S. Patent 4,804,831A) is respectfully requested.

Claims 13 and 15 depend ultimately from Claim 1. Applicant has already addressed the novel aspects that overcome the rejection of Claim 1, and hence the reasons for patentability thereof. It is thus respectfully submitted that Claims 13 and 15 are likewise patentable.

Claim 17.

Reconsideration of the Examiner's rejection of Claim 17 under 35 U.S.C. 103(a) as being patentable over Reuman (U.S. Patent 6,069,982 A) and in view of May (U.S. Patent 6,667,125 A) is respectfully requested.

Claim 17 depends ultimately from Claim 1. Applicant has already addressed the novel aspects of Claim 1, and hence the reasons for patentability thereof. It is thus respectfully submitted that Claim 17 is likewise patentable.

Claim 27.

Although the Examiner has not provided a basis for the rejection of Claim 27, Applicant calls to the Examiner's attention that Claim 27 depends from Claim 1. Applicant has already addressed the novel aspects that overcome the rejection of Claim 1, and hence the reasons for patentability thereof. It is thus respectfully submitted that Claim 27 is likewise patentable.

New Claims 28 and 29.

New Claims 28 and 29 depend from Claim 1 and further claim, respectively, the steps of predicting the appearance of noisiness of an image as seen by a human observer using the noise metric from the noise table (Claim 28), and sorting images from least to most noisy in appearance according to the noise metric (Claim 29).

Support for Claim 28 can be found at Page 7, Lines 21-28 of the specification, where the following appears:

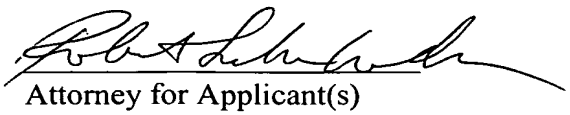
> Notice that the present invention uses as inputs, an input noise table, an image processing path, and optional weighting function and accuracy data. All of these inputs contain information about an image and its intended purpose, but themselves are non-image data. Non-image data associated with an image is often referred to as metadata. Thus, the present invention has the capability of determining the noise appearance of an image based soley on metadata analysis.

Support for Claim 29 can be found at Page 17, Lines 1-7 and the accompanying Figures, where the following appears:

> In the preferred embodiment, h(x)=log(x). Referring to the images shown in Fig. 9, the output noise metrics computed according to the present invention for the image shown in Figs. 9a, 9b, and 9c are 390, 290, and 240 respectively. The noise metrics decrease along with human perception that the graininess of Fig. 9a is greater than the graininess of Fig. 9b, which is greater than the image shown in Fig. 9c.

It is respectfully submitted, therefore, that in view of the above amendments and remarks, that this application is now in condition for allowance, prompt notice of which is earnestly solicited.

Respectfully submitted,



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